

## REMARKS

This is intended as a full and complete response to the Office Action dated June 29, 2005, having a shortened statutory period for response set to expire on September 29, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-32 are pending in the application and are shown above. Claims 1-29 stand rejected and claims. Claims 1, 2, 10, 15-16, 24-25, and 28-29 are amended to correct matters of form. New claims 30-32 are added.

### ***Claim Rejections - 35 U.S.C. § 103***

Claims 1-6, 8-10, 12-13, 15-21, 24-27 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,850,071 to *Makiguchi et al* (hereafter *Makiguchi*). Applicants respectfully traverse this rejection.

*Makiguchi* teaches a substrate heating equipment including a heater support frame within a vacuum vessel, opposed panel heaters disposed in a pluri-shelved fashion within the heater support frame, and support means for supporting a substrate to be treated between an adjacent pair of the opposed panel heaters (Abstract). *Makiguchi* further discloses a temperature controller to control the temperature of individual opposed panel heaters so that different heating temperatures do not raise between high-positioned substrates and low-positioned substrates.

Regarding claim 1, the Examiner points out that *Makiguchi* does not teach an unheated plate adapted to support a substrate thereon, the unheated plate disposed between two heated plates. However, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the Applicants' invention was made to have provided any of the plates in *Makiguchi* as unheated by controlling the power supply in order to avoid different heating temperatures between high positioned substrates and low positioned substrates. Applicants submit that *Makiguchi* does not suggest to make any plates unheated in order to avoid temperature difference between low and high positioned substrates. Instead, *Makiguchi* teaches to heat the substrate with the opposed panel heaters from above and below to get a uniform heating when the substrate become large in size (column 8 lines 17-23). Thus,

Applicants submit that the Examiner's conclusion that *Makiguchi* suggests using controllable heater panels as unheated plates relies solely upon impermissible hindsight reconstructed based upon Applicants' specification. Furthermore, the Examiner's assertion that a heated plate (40) of *Makiguchi* is adapted to support a first large area substrate therein is not accurate. Instead, *Makiguchi* discloses that the substrate is supported by receivers (44) (Figure 4, column 4 lines 45-52).

Thus, *Makiguchi* does not teach, show or suggest an apparatus for thermally processing large area substrates comprising a chamber, a plurality of processing zones disposed in the chamber, and a lift mechanism coupled to the plurality of processing zones and adapted to vertically position the plurality of processing zones within the chamber, wherein each zone further comprises an upper heated plate, a lower heated plate adapted to support a first large area substrate thereon, and an unheated plate adapted to support a second large area substrate thereon, the unheated plate disposed between the upper and lower heated plates, as recited in claim 1, and claims dependent thereon. Therefore, claims 1-6, 8-10, and 12-13 are believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

Similarly, independent claims 15 and 24 recite a plurality of unheated plates, which is not taught, disclosed or suggested by *Makiguchi*. Therefore, Applicants submit that *Makiguchi* fails to teach, show or suggest each and every limitation recited by claims 15 and 24, and claims dependent thereon. Claims 15-21, 24-27 and 29 are believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

Claims 7, 14 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Makiguchi* in view of U.S. Patent No. 4,386,255 to *Berkman et al* (hereafter *Berkman*).

As discussed above, *Makiguchi* does not teach, show or suggest each and every limitation recited in claims 1 and 24, on which claims 7, 14 and 28 are dependent.

*Berkman* discloses a susceptor comprises discs having a plurality of radial slots formed adjacent the periphery of the disc. The discs of *Berkman* are stacked

together and the susceptor is heated by an rf induction coil position adjacent a chamber where the susceptor is disposed (Abstract, column 1 lines 37-38). Therefore, *Berkman's* teaching for susceptor discs heated from the periphery is not applicable to the plates heated by substantially parallel heaters of the present invention.

As such, the references, *Makiguchi* and *Berkman*, alone or in combination, do not teach, show or suggest each and every limitation recited in claims 1 and 24, on which claims 7, 14, and 28 are dependent. Therefore, claims 7, 14, and 28 are believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Makiguchi* in view of U.S. Patent No. 6,046,435 to *Holden et al* (hereafter *Holden*).

*Makiguchi* is discussed above.

*Holden* discloses a substrate heating apparatus having a plurality of heaters adapted to heat substrates supported on top. However, the combination of *Holden* of *Makiguchi* does not teach or suggest every limitation recited by claim 1, on which claim 11 is dependent.

As such, the references, *Makiguchi* and *Holden*, alone or in combination, do not teach, show or suggest each and every limitation recited in claim 1, on which claim 11, is dependent. Therefore, claims 11 is believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

Claim 22 stands rejected under U.S.C. § 103(a) as being unpatentable over *Makiguchi* in view of U.S. Patent No. 5,259,881 to *Edwards et al* (hereafter *Edwards*) and U.S. Patent No. 4,979,464 to *Kunze-Concewitz et al* (hereafter *Kunze-Concewitz*).

*Makiguchi* is discussed above.

*Edwards* discloses a wafer processing cluster tool having one or more batch preheating modules. *Kunze-Concewitz* discloses an apparatus for treating a plurality of wafers. The combination of *Makiguchi*, *Edwards* and *Kunze-Concewitz* does not teach, show or suggest each and every limitation recited in claim 15, on which claim 22, is dependent. Therefore, claims 22 is believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Makiguchi* in view of U.S. Patent No. 3,832,815 to *Balaz et al* (hereafter *Balaz*).

*Makiguchi* as discussed above.

*Balaz* discloses a ceramic fiber insulation for lining furnaces. The combination of *Makiguchi* and *Balaz* does not teach, show or suggest each and every limitation recited in claim 15, on which claim 23, is dependent. Therefore, claims 23 is believed to be in condition for allowance. Withdrawal of this rejection is respectfully requested.

### ***New Claims***


New claims 30-32 comprise subject matter which is not taught or suggested by the references. Therefore, Applicants respectfully request allowance of these claims.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



---

Keith M. Tackett  
Registration No. 32,008  
PATTERSON & SHERIDAN, L.L.P.  
3040 Post Oak Blvd. Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for Applicant(s)